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Farm Mobilization **FACT SHEET**

Save Grain Through Good Pasture

Grass is a crop--a good crop or a poor one, depending on the attention given to it. Grass is a cheap feed. That's important at any time, but it is doubly important this year to help stretch the supply of feed grains. Grass is a nourishing feed--no matter what kind of animals or poultry consume it. The better the grass, the better the herd or flock. Farmers who are short of feed and cannot keep as much livestock as they should are often able to lick such problems through pasture improvement.

This fact sheet presents some general recommendations for pasture improvement. It is intended as source material for dissemination chiefly through State Extension Services. The Land-Grant Colleges and county agents are recognized as the main source of specific know-how applicable to local conditions. The fact sheet is being distributed only to Extension workers and others concerned with agricultural information, not to farmers.

Dairy cattle.--Dairy cows get their best and cheapest feed from pasture. They need less grain and their milk has more vitamin A when they are on good pasture. A good dairy cow on adequate pasture alone will give 25 to 30 pounds of milk a day. Pastures of average quality and production will provide daily the equivalent of 8 pounds of hay, 25 pounds of silage, and 4 pounds of grain. Dairy heifers can be raised on good hay and pasture without grain.

Beef cattle.--On the average, beef cattle obtain 75 percent of their feed nutrients from pasture and hay. Steers started on grass and finished by dry-lot feeding will use only half as much corn per 100 pounds of added weight as those fed in the dry lot throughout. An acre of good permanent pasture will equal 58 bushels of corn in adding weight to cattle.

Hogs.--Grain-fed pigs are healthier and gain faster when allowed to graze. A combination of permanent and temporary pasture can save up to half of the concentrated protein supplement needed by pigs in dry (bare) lot. Rye, rape, oats, wheat, soybeans, cowpeas, and field peas provide good temporary pasture. Alfalfa, ladino and other clovers, and Korean lespedeza make good permanent pasture.

Poultry.--Poultry in good pasture eat about 10 percent less mash and grain than they do in confinement. Ladino clover has been worth \$100 an acre as poultry pasture for egg production. Pasture is especially important in raising healthy, vigorous pullets for flock replacements. Green, succulent pasture for turkeys more than 8 weeks old may save at least 20 percent of feed required. Alfalfa, ladino and other clovers, and temporary pastures of rape, cereal grains, and soybeans are excellent.

How to Get Better Pastures

Pastures can be grown in nearly every section of the United States. Although soil and climatic conditions vary widely from State to State and from county to county, recommended pasture programs have been worked out in most areas. For specific recommendations on pasture improvement, farmers should see their county agent.

USE ENOUGH FERTILIZER

The necessary investment in lime and fertilizers usually pays high returns in better pasture stands. Legumes like lime. They grow satisfactorily and provide nitrogen efficiently only when the soil is well supplied with lime. Many pasture soils in the humid regions of the United States need lime. The benefit of an adequate application of lime lasts from 5 to 10 years. One season's growth of alfalfa under favorable conditions may provide nitrogen worth more than enough to buy the lime.

Barnyard manure, fortified with phosphate, is valuable in improving pastures. It may be put on in the fall or early spring, 6 to 8 tons to the acre, with superphosphate added. Harrowing during the season will spread cattle droppings. Top dressings of phosphate and potash will improve the fertility of most pasture soils. Where legumes are lacking, nitrogen should be used. There are no substitutes for proper fertilization, the use of adapted grasses and legumes, and improved grazing management.

USE ADAPTED SEED

Seed of varieties adapted to local conditions gives best results. The supply of most grass seeds for humid areas is adequate. That for arid sections is less plentiful. Always use certified seed when available. Grasses recommended for various regions are:

NORTHEAST AND NORTH CENTRAL--Orchardgrass; Lincoln, Achenbach, Fischer, Lyon or Lancaster brome grass; Marietta and Lorraine timothy; Reed canarygrass and tall fescue for wetlands; and Piper sudangrass.

SOUTHEAST--Dallisgrass, Bahiagrass, Coastal Bermudagrass, Alta or Kentucky 31 tall fescue, Starr millet, Sweet or Tift Sudangrass, Italian ryegrass, Pangola grass (Florida only), and Rescue grass.

NORTHERN GREAT PLAINS--Crested wheatgrass, Russian wildrye, intermediate wheatgrass, Lincoln, Achenbach, Fischer, Lyon, Lancaster, and Manchar brome grass, Mandan wildrye, Green stipagrass, tall wheatgrass (alkali lands), and Western wheatgrass.

INTERMOUNTAIN REGION--Wheatgrass and wildrye for drier sections, brome grass, orchardgrass, tall oatgrass, and timothy for humid sections.

SOUTHERN GREAT PLAINS AND SOUTHWEST--Hays buffalo grass, Tucson or Elreno side-oats grama, blue grama, Blackwell switchgrass, sand lovegrass, weeping lovegrass, Lehmann lovegrass, big bluestem, little bluestem, sand bluestem, Turkestan bluestem, and western wheatgrass.

PACIFIC COAST--Alta or Kentucky 31 tall fescue, orchardgrass, perennial ryegrass, common ryegrass, Tualatin tall oatgrass, reed canarygrass, meadow foxtail, Bromar mountain brome grass, and Harding grass.

USE MIXTURES FOR HIGHER PRODUCTION

Mixtures of grasses and legumes may produce two or three times as much pasture or hay as grass alone. On many soils such mixtures may produce more feed units per acre than corn and grain crops.

All legume seed should be treated with the proper culture just before seeding. In this way the most efficient bacteria will be at hand for fixing atmospheric nitrogen in the soil.

In the Northeast and the southern part of the North Central region, orchardgrass and ladino clover make one of the most satisfactory combinations. Orchardgrass recovers rapidly after grazing or mowing, and it continues to grow during midsummer when temperatures may be high and rainfall limited. Ladino clover, a relatively new legume, is a perennial. It is more productive for pasture or hay than common white clover. Another combination widely used in the Northeast and Northcentral or Corn Belt States is a mixture of brome grass, ladino clover and alfalfa. These mixtures require good fertility. Alfalfa, ladino clover and sweetclover are recommended as legumes for renovating pastures. Sweetclover seed is less expensive than most common legumes and the plant is resistant to heat and drought. Red and ladino clover produce abundantly from relatively low seeding rates. Alsike clover is particularly good on wet soils. Alfalfa is recommended for use on deep fertile soils.

In the Southeast, crimson clover makes a good legume combination with ryegrass or Coastal Bermuda. It may be mixed with winter oats for fall sowing. White Dutch clover and Dallisgrass are furnishing good grazing from about March 1 to November 1 in the Piedmont and Gulf Coast area. Temporary crops such as Sudan grass, Starr millet, and kudzu may be used to supplement this permanent pasture.

In the Pacific Coast states, the more humid parts of the Intermountain Region, and irrigated regions of the West, smooth brome, orchard, tall fescue, reed canary, tall oatgrass, red clover, ladino clover, alfalfa, big trefoil and birdsfoot trefoil are relatively high producers.

In the Great Plains, the Southwest, and the drier sections of the Intermountain Region, legumes are not commonly used in mixed seedings because of the difficulty of obtaining and maintaining stands. Under some conditions in these areas, alfalfa and sweetclover are used.

Grain crops help pastures. In the Southeast, winter oats planted alone or mixed with crimson clover are recommended for fall sowing. Farther north, all small grains can be used for fall and early spring pasture.

USE WEED-FREE SEED

The use of high-quality, certified, clean seed of known pedigree and origin is a sound basis for a weed control program in pastures and forage crops. Thorough seedbed preparation, followed by timely, efficient mowing has an extremely impor-

tent place in weed control. Even though recommended cultural practices are closely followed, however, certain weeds may become serious pests in pastures.

Chemicals can be used safely and economically for the control of many weeds in pastures. Ladino and white clover can be sprayed with 2,4-D where broadleaf weeds, including wild onions, are a problem. But since these clovers can be adversely affected by 2,4-D, the spraying should be done with caution. Most woody plants can be controlled by either 2,4,5-T or a mixture of 2,4-D and 2,4,5-T. Winter annual weeds in alfalfa can be controlled by spraying with dinitro compounds which are now generally available.

REGULATE GRAZING

A recommended practice is to regulate grazing through rotation, when the pasture is divided and the livestock moved to new grazing areas. It also helps to top the beef herd in August and take out cattle that are ready for market.

Rotation grazing must be done with brome grass and alfalfa, or orchard-grass and ladino clover and other tall, rapidly growing mixtures. Otherwise the plantings may die out or give poor yields. Rotation grazing does less good in permanent pasture. Deferred grazing often helps range land.

In the East, alfalfa should not be grazed from early September until after the first killing frost because it may die out if grazed during active growth in the fall. Moderate grazing after the first killing frost, however, will usually do no harm.

Winter grain crops such as wheat, oats, barley, and rye, planted in late August or early September and allowed to grow to a 10- or 12-inch height, may be grazed safely down to 3 or 4 inches and still survive the winter.

As a safeguard against bloat when grazing alfalfa and other pastures composed largely of legumes, cows should have access to dry hay or straw at all times. Also, they should not be allowed in the pasture while the legumes are in an extremely young stage.

Sudan grass should be 15 to 20 inches high before it is grazed. To avoid danger of prussic acid poisoning, Sudan grass should not be grazed during severe drought or right after a frost.

TURN SURPLUS PASTURE INTO HAY OR SILAGE

During favorable seasons when there is likely to be a surplus of pasture, such surplus can be conserved as hay or silage. In the humid areas of the country where haymaking is hazardous, more dry matter, carotene, and protein can be conserved by making this surplus into silage rather than hay.

